

Writing Rules for Calibre Student Workbook

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Module 1

Foundational Concepts

Objectives

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When you complete this module, you will be able to:

- ◆ Explain the process of writing and executing a rule file in the Standard Verification Rule Format
- ◆ Follow general SVRF syntactic conventions
- ◆ Explain the purpose and usage of a DRC RuleCheck
- ◆ Explain the purpose and usage of a DRC constraint
- ◆ Use string constants and variables in a rule file

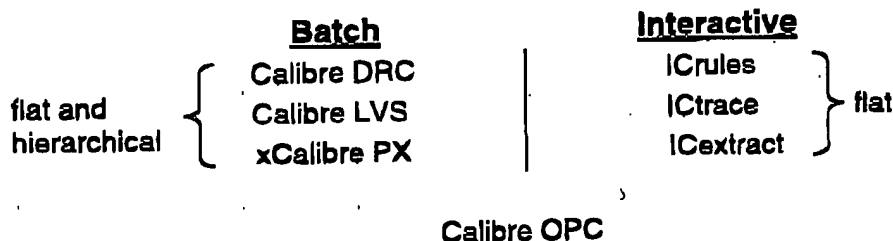
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Foundational Concepts

What is SVRF?

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- ◆ Standard Verification Rule Format
- ◆ Set of specification statements and operation statements from which you create a rule file to verify your design
- ◆ Drives all Mentor Graphics physical verification tools:



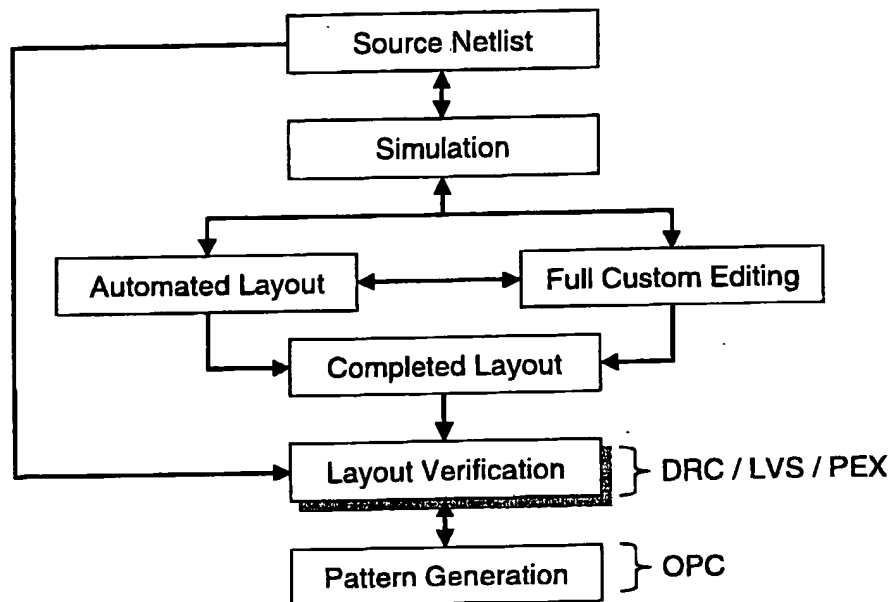
References

For more information on this topic, refer to Chapter 1 of the *SVRF Manual* and Chapter 2 of the *Calibre Verification User's Manual*.

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Typical IC Design and Verification Flow

Typical IC Design and Verification Flow



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P3

Declaring a Rule File Variable

Declaring a Rule File Variable

- ◆ Use the SVRF specification statement:
`VARIABLE name value`
- ◆ Instructs Calibre to replace `name`, when it appears in any operation or appropriate specification statement, with `value`
- ◆ Calibre can resolve a variable inside a RuleCheck comment if you precede the variable with a “^” character
- ◆ You may not redefine a variable
- ◆ If you nest variable definitions, then you must order the statements to avoid unresolved dependent variables

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Foundational Concepts

Example of Using a Rule File Variable

Example of Using a Rule File Variable

Before
compilation

rule file

```
VARIABLE MSPACE 2 // declare variable

Rule_9 {
    @ Metal spacing must be ^MSPACE microns.
    EXTERNAL metal < MSPACE
}
```

After
compilation

rule file

```
Rule_9 {
    @ Metal spacing must be 2 microns.
    EXTERNAL metal < 2
}
```

References

For more information on this topic, refer to Chapter 1 of the *SVRF Manual* and Chapter 2 of the *Calibre Verification User's Manual*.